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IN THE CLAIMS

1. (Currently Amended) A blocked mercaptosilane selected from the group consisting of:



wherein

i) for structures (1) and (2), Y is a polyvalent species $(\text{Q})_x\text{A}(=\text{E})$ selected from the group consisting of $-\text{C}(=\text{NR})-$; $-\text{SC}(=\text{NR})-$; $-\text{SC}(=\text{O})-$; $-\text{S}(=\text{O})-$; $-\text{S}(=\text{O})_2-$; $-\text{OS}(=\text{O})_2-$; $(-\text{NR})\text{S}(=\text{O})_2-$; $-\text{SS}(=\text{O})-$; $-\text{OS}(=\text{O})-$; $(-\text{NR})\text{S}(=\text{O})-$; $-\text{SS}(=\text{O})_2-$; $-\text{P}(=\text{O})(-\text{O})-$; $-\text{P}(=\text{O})(-\text{O})_2-$; $-\text{P}(=\text{S})(-\text{O})-$; $-\text{P}(=\text{S})(-\text{O})_2-$; $(-\text{NR})_2\text{P}(=\text{O})-$; $(-\text{NR})(-\text{S})\text{P}(=\text{O})-$; $(-\text{O})(-\text{NR})\text{P}(=\text{O})-$; $-\text{P}(=\text{O})(-\text{O})-$; $(-\text{NR})\text{P}(=\text{O})-$; $(-\text{NR})_2\text{P}(=\text{S})-$; $(-\text{NR})(-\text{S})\text{P}(=\text{S})-$; $(-\text{O})(-\text{NR})\text{P}(=\text{S})-$; $-\text{P}(=\text{S})(-\text{O})-$; and $(-\text{NR})\text{P}(=\text{S})-$;

ii) for structure (1), ~~Y is a polyvalent species $(\text{Q})_x\text{A}(=\text{E})$ selected from the group consisting of $-\text{P}(=\text{O})(-\text{O})-$; $\text{P}(=\text{O})(-\text{O})_2-$; $-\text{P}(=\text{S})(-\text{O})-$; $\text{P}(=\text{S})(-\text{O})_2-$; $(-\text{O})\text{P}(=\text{O})-$; and $(-\text{O})\text{P}(=\text{S})-$~~ Y' is a polyvalent species $(\text{O})_x\text{A}(=\text{E})$ selected from the group consisting of $-\text{C}(=\text{NR})-$; $-\text{SC}(=\text{NR})-$; $-\text{SC}(=\text{O})-$; $-\text{S}(=\text{O})-$; $-\text{S}(=\text{O})_2-$; $-\text{OS}(=\text{O})_2-$; $(-\text{NR})\text{S}(=\text{O})_2-$; $-\text{SS}(=\text{O})-$; $-\text{OS}(=\text{O})-$; $(-\text{NR})\text{S}(=\text{O})-$; $-\text{SS}(=\text{O})_2-$; $(-\text{NR})_2\text{P}(=\text{O})-$; $(-\text{NR})(-\text{S})\text{P}(=\text{O})-$; $(-\text{O})(-\text{NR})\text{P}(=\text{O})-$; $(-\text{NR})\text{P}(=\text{O})-$; $(-\text{NR})_2\text{P}(=\text{S})-$; $(-\text{NR})(-\text{S})\text{P}(=\text{S})-$; $(-\text{O})(-\text{NR})\text{P}(=\text{S})-$; and $(-\text{NR})\text{P}(=\text{S})-$;

wherein the atom A, attached to unsaturated heteroatom E is attached to the sulfur which in turn is linked via a group G to the silicon atom;

each R is chosen independently from hydrogen, straight, cyclic, or branched alkyl that may or may not contain ~~unsaturations~~ a carbon-carbon double bond, an alkenyl groups, an aryl groups, and and/or an aralkyl groups, with each R contains ~~containing~~ from 1 to 18 carbon atoms;

each G is independently a monovalent or polyvalent group derived by substitution of alkyl, alkenyl, aryl, or aralkyl wherein G can contain from 1 to 18 carbon atoms, wherein at least one G is polyvalent, and if G is ~~univalent~~ monovalent, G can be a hydrogen atom;

X is independently selected from the group consisting of $-\text{Cl}$, $-\text{Br}$, $\text{RO}-$, $\text{RC}(=\text{O})\text{O}-$, $\text{R}_2\text{C}=\text{NO}-$, $\text{R}_2\text{NO}-$, $\text{R}_2\text{N}-$, $-\text{R}$, and $-(\text{OSiR}_2)\text{t}(\text{OSiR}_3)$ wherein each R is as above and at least one X is not $-\text{R}$;

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p is 0 to 5; r is 1 to 3; z is 0 to 2; q is 0 to 6; a is 0 to 7; b is 1 to 3; j is 0 to 1, but it may be 0 only if p is 1; c is 1 to 6; t is 0 to 5; s is 1 to 3; k is 1 to 2; with the provisos that (I) if A is carbon, sulfur, or sulfonyl, then (i) a + b is 2 and (ii) k is 1; (II) if A is ~~phosphorus~~phosphorous, then a + b is 3 unless both (i) c is greater than 1 and (ii) b is 1, in which case a is c + 1; and (III) if A is ~~phosphorus~~phosphorous, then k is 2 and G is a monovalent or polyvalent group derived by substitution of alkyl, alkenyl, aryl, or aralkyl wherein G contains from 1 to 18 carbon atoms.

2. (Original) A blocked mercaptosilane according to claim 1 wherein R is selected from the group consisting of methyl, ethyl, propyl, isobutyl, phenyl, tolyl, phenethyl, norbornyl, norbornenyl, ethylnorbornyl, ethylnorbornenyl, ethylcyclohexyl, ethylcyclohexenyl, and cyclohexylcyclohexyl.

3. (Previously Presented) A blocked mercaptosilane according to claim 1 according to formula (1).

4. (Withdrawn) A blocked mercaptosilane according to claim 1 according to formula (2).

5. (Original) A blocked mercaptosilane according to claim 1 which has been partially hydrolyzed.

6. (Currently Amended) A blocked mercaptosilane according to claim 1 wherein Y is selected from the group consisting of: -SC(=O)-; -S(=O)-; -OS(=O)-; -(-S)P(=O)-; and -P(=O)(-)₂, and wherein Y' is selected from the group consisting of: -SC(=O)-; -S(=O)-; -OS(=O)-; and -P(=O)(-)₂.

7. (Withdrawn) The blocked mercaptosilane of claim 1 wherein Y is selected from the group consisting of -C(=NR)- and -SC(=NR)-.

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8. (Withdrawn) The blocked mercaptosilane of claim 1 wherein Y is selected from the group consisting of $-S(=O)_2-$; $-OS(=O)_2-$; $(-NR)S(=O)_2-$; $-SS(=O)-$; $(-NR)S(=O)-$; $-SS(=O)_2-$.

9. (Withdrawn) The blocked mercaptosilane of claim 1 wherein Y is selected from the group consisting of $(-S)_2P(=O)-$; $-(S)P(=O)-$; $-P(=O)(-)_2$; $(-S)_2P(=S)-$; $-(S)P(=S)-$; $-P(=S)(-)_2$; $(-NR)_2P(=O)-$; $(-NR)(-S)P(=O)-$; $(-O)(-NR)P(=O)-$; $(-O)(-S)P(=O)-$; $(-O)_2P(=O)-$; $(-O)P(=O)-$; $-(NR)P(=O)-$; $(-NR)_2P(=S)-$; $(-NR)(-S)P(=S)-$; $(-O)(-NR)P(=S)-$; $(-O)(-S)P(=S)-$; $(-O)_2P(=S)-$; $(-O)P(=S)-$; and $-(NR)P(=S)-$.

10. (Original) A blocked mercaptosilane according to claim 1 wherein the sum of the carbon atoms within the G groups within the molecule is from 3 to 18.

11. (Original) A blocked mercaptosilane according to claim 1 wherein X is selected from the group consisting of methoxy, ethoxy, isobutoxy, propoxy, isopropoxy, acetoxy, and oximato.

12. (Original) A blocked mercaptosilane according to claim 1 wherein p is 0 to 2; X is RO- or $RC(=O)O-$; R is selected from the group consisting of hydrogen, phenyl, isopropyl, cyclohexyl, isobutyl; and G_i is a substituted phenyl or substituted straight chain alkyl of C₂ to C₁₂.

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13. (Withdrawn) A blocked mercaptosilane of the formula
 $X_3SiGSC(=O)GC(=O)SGSiX_3$ wherein

each R is chosen independently from hydrogen, straight, cyclic, or branched alkyl that may or may not contain unsaturation, alkenyl groups, aryl groups, and aralkyl groups, with each R containing from 1 to 18 carbon atoms;

each G is independently a divalent group derived by substitution of alkyl, alkenyl, aryl, or aralkyl, wherein G can contain from 1 to 18 carbon atoms, with the proviso that G is not such that the blocked mercaptosilane would contain an α,β -unsaturated carbonyl including a carbon-carbon double bond next to the thiocarbonyl group;

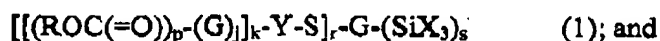
X is independently selected from the group consisting of $-Cl$, $-Br$, $RO-$, $RC(=O)O-$, $R_2C=NO-$, R_2NO- , R_2N- , $-R$ and $-(OSiR_2)_t(OSiR_3)$ wherein each R is as above and at least one X is not $-R$; and

t is 0 to 5.

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33. (Withdrawn) A blocked mercaptosilane selected from the group consisting of:



wherein

Y is $-\text{OC}(=\text{O})-$;

each R is chosen independently from hydrogen, straight, cyclic, or branched alkyl that may or may not contain unsaturation, alkenyl groups, aryl groups, and aralkyl groups, with each R containing from 1 to 18 carbon atoms;

each G is independently a monovalent or polyvalent group derived by substitution of alkyl, alkenyl, aryl, or aralkyl, wherein G can contain from 1 to 18 carbon atoms, and if G is univalent, G can be a hydrogen atom;

X is independently selected from the group consisting of $-\text{Cl}$, $-\text{Br}$, $\text{RO}-$, $\text{RC}(=\text{O})\text{O}-$, $\text{R}_2\text{C}=\text{NO}-$, $\text{R}_2\text{NO}-$, $\text{R}_2\text{N}-$ and $-\text{R}$ wherein each R is as above and at least one X is not $-\text{R}$;

p is 0 to 5; r is 1 to 3; z is 0 to 2; q is 0 to 6; a is 0 to 7; b is 1 to 3; j is 0 to 1, but it may be 0 only if p is 1; c is 1 to 6; t is 0 to 5; is 1 to 3; k is 1 to 2; with the provisos that (I) if A is carbon, sulfur or sulfonyl, then (i) $a + b$ is 2 and (ii) k is 1; (II) if A is phosphorus, then $a + b$ is 3 unless both (i) c is greater than 1 and (ii) b is 1, in which case a is $c + 1$; and (III) if A is phosphorus, then k is 2.

34. (Withdrawn) A blocked mercaptosilane according to claim 33 wherein R is selected from the group consisting of methyl, ethyl, propyl, isobutyl, phenyl, tolyl, phenethyl, norbornyl, norbornenyl, ethylnorbornyl, ethylnorbornenyl, ethylcyclohexyl, ethylcyclohexenyl, and cyclohexylcyclohexyl.

35. (Withdrawn) A blocked mercaptosilane according to claim 33 according to formula (1).

36. (Withdrawn) A blocked mercaptosilane according to claim 33 according to formula (2).

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37. (Withdrawn) A blocked mercaptosilane according to claim 33 which has been partially hydrolyzed.

38. (Withdrawn) A blocked mercaptosilane according to claim 33 wherein the sum of the carbon atoms within the G groups within the molecule is from 3 to 18.

39. (Withdrawn) A blocked mercaptosilane according to claim 33 wherein X is selected from the group consisting of methoxy, ethoxy, isobutoxy, propoxy, isopropoxy, acetoxy, and oximato.

40. (Withdrawn) A blocked mercaptosilane according to claim 33 wherein p is 0 to 2; X is RO- or RC(=O)O-; R is selected from the group consisting of hydrogen, phenyl, isopropyl, cyclohexyl, isobutyl; and G is a substituted phenyl or substituted straight chain alkyl of C₂ to C₁₂.